

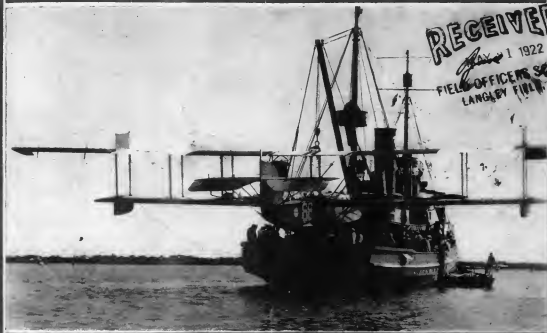
NEW PRICE 10 CENTS

# AVIATION

MAY 29, 1922

Issued Weekly

PRICE 10 CENTS



Hoisting a Naval F5L Flying Boat on the Aircraft Tender "Sandpiper"

VOLUME XII

Number 22

## SPECIAL FEATURES

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If the above thoughts appeal to you, address our School Division for further information. There will be no obligation at all and we have a complete new booklet on this particular subject, which is free for the asking. Even if you should decide you would not care for it for yourself, why not send for it for someone else? Many likely young men might be glad to know of just such an opportunity as this and would appreciate your putting them in touch with it.

## DAYTON WRIGHT COMPANY

SCHOOL DIVISION

DAYTON, OHIO, U. S. A.

"The bridge of the airplane"



GENERAL  
MOTORS



MAY 29, 1922

# AVIATION

VOL. XII. NO. 22

Member of the Audit Bureau of Circulations

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## THOMAS-MORSE AIRCRAFT CORPORATION

CONTRACTORS TO U. S. GOVERNMENT

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NEW YORK



## WAR DEPARTMENT

## June

June 1—**AIR SERVICE SUPPLIES**—Washington, Pa. Aviation. For catalog write: C. G. & Co. 1000 1st Ave. S. E., Seattle, Wash.

June 2—**Q-M SUPPLIES**—Came Airplane & Co. Aviation. For catalog write: C. G. & Co. 1000 1st Ave. S. E., Seattle, Wash.

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## SELLING PROGRAM

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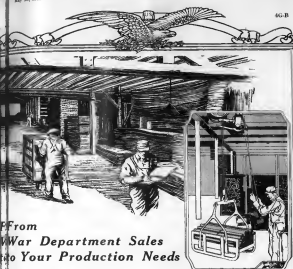
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THE list of sales in this section is one under the War Department Sales to Your Production Needs. It is a list of materials you can use to improve your production. Detailed description of each sale and the benefits of each sale are given in this section. The benefits of the War Department Sales to Your Production Needs are: 1. They are sold at a discount. 2. They are sold in large quantities. 3. They are sold in a convenient form. 4. They are sold in a convenient location. 5. They are sold in a convenient time. 6. They are sold in a convenient manner. 7. They are sold in a convenient way. 8. They are sold in a convenient place. 9. They are sold in a convenient time. 10. They are sold in a convenient manner. 11. They are sold in a convenient way. 12. They are sold in a convenient place. 13. They are sold in a convenient time. 14. They are sold in a convenient manner. 15. They are sold in a convenient way. 16. They are sold in a convenient place. 17. They are sold in a convenient time. 18. They are sold in a convenient manner. 19. They are sold in a convenient way. 20. They are sold in a convenient place.

The Government reserves the right to select one or all of the items listed.



## From War Department Sales to Your Production Needs

Here is a source of supply it will pay your purchasing department to investigate. Sales are conducted virtually every week by auction or sealed bid. Follow the War Department advertisements, write for catalogs of materials you can use, and participate in the sales.

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Office of Director of Sales  
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# WAR DEPARTMENT



## Quality Depends on Environment

A few years ago an Armenian brought to this country some seeds of the fine-leaved tobacco grown in Turkey which had a reputation for being rare and of very fine quality.

He planted them with great care in soil and under a sky which seemed to him precisely like those of their native home.

When the plants came up and grew to maturity, he found that he had a coarse valueless product which developed a

leaf as big and as rough as a "Connecticut wrapper."

Martin-built Bombers have a reputation for fine performance unequalled by any in the United States. That reputation is the result of unique methods of production and engineering control developed by men with years of experience in successful airplane design and manufacture.

There is a reason for the universal confidence in the Glenn L. Martin Bomber.

**THE GLENN L. MARTIN COMPANY**

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# AVIATION

LAMARCA O'NEILL EDITOR  
VICTOR E. CLARK  
EDWARD F. WARD  
RALPH H. LINDEN  
CONTRIBUTING EDITORS

VOL. XII

MAY 20, 1932

No. 22

### The Sense of Airworthiness Certificate

SOME months ago, when the Undersecretary Laboratories issued its first list of aircraft and pilot registrations, the system was expressed here that this work possessed considerable value in that it afforded the public a means for determining aircraft known to be safe from those which may or may not be safe. Attention was also called at the time to the possibility that before federal legislation may actually come into being many months may elapse, so that the Undersecretary Laboratories would do the work which would normally devolve upon the government.

Since then four months have elapsed and the Waldenath Bill is still under consideration in the Foreign Affairs Committee of the House. This means that for all practical purposes the present flying system will go by without federal legislation.

In view of all this, it is highly gratifying to see that the Undersecretary Laboratories have now enlarged the scope of their work by issuing, in addition to aircraft and pilot certificates, airworthiness certificates. As the issue of the latter is governed by previously the same conditions as apply in Great Britain, France, and the other countries which have joined the International Air Convention, American civil aviation will receive most of the benefits of said convention, without actually being a signatory. It is very fortunate that this should be so, for as we have said on various occasions in these columns, civil air transport will find its most profitable field of enterprise in international traffic, and here it is of the utmost importance that a single set of rules apply with regard to aerial traffic, airworthiness and pilot qualifications.

This does not mean, however, that the acquisition plan of Undersecretary Laboratories would lose its usefulness of federal air legislation is passed by Congress, or if the United States signs the International Air Convention, for, taking the case of stopping government requirements are in a safe line stronger than those enforced by municipalities, this for obvious reasons. Just as a private aviation certificate issued to a ship has a greater value than one given by a government, so it will be in a case of aircraft. The Undersecretary Laboratories deserve, therefore, the support of all those concerned with the best interests of American Civil Aviation.

### Encouraging Civil Aviation

THE railways in the United States received one hundred and twenty-one million acres of land to enable them to get a start. This does not include all the additional grants given to them in the early days, nor does it take into account the assistance given them to eliminate prejudice against such a form of transportation.

The question arises whether, in case airplane operating companies are similarly endowed, it will bring about aerial

routes opening an schedule throughout the whole country and if so, seeing that we have no savings to hand out or hundreds to turn over, what is the best form of assistance the government can render?

Those who are behind the movement to launch the National Aeronautics Association of the U.S.A. state that its biggest function will be to verify that airports which does not seem to be forthcoming as it was in the days of railway development. They are going to ask every city and every town to give to the owner every inch of it, not an actual inch but in landing fields, aids to navigation and by meeting in any way that will bring to the community some immediate return, a return in improved transportation facilities if not a dividend by way of ensuring that that community will be absent of the times. They point out, however, that it will not take anything like the equivalent of 100 million acres of land but something like the equivalent of communities by careful selection of the public will secure the equivalent and give to the operators of planes that portion of their own-hand expenses that such a landing.

### Massachusetts Falls in Line

THE significance in accordance of the provision of a landing field in East Boston, owned by the city which has just gone into force in Massachusetts, can hardly be overestimated. It means Boston is a head from one of the most unfortunate positions in one of the best in respect of aerial transportation. The East Boston landing field, so placed as to serve both Long Island and Lynden and within 15 minutes of the heart of the city by street railway, should become an asset for the purpose of establishing that field without recognition of the fact that the whole state profits from landing fields in the neighborhood of large cities and that the whole state should cooperate in providing facilities for the development of transportation by air. As Governor Cox pointed out in his statement on the signing of the bill, it is particularly appropriate that Massachusetts should take a particularly appropriate in commercial aviation, for Massachusetts' landing position has been founded happily on the backbone of the seafarers who went forth from her ports and it is fitting that her citizens should develop flying as once they developed the trigger ship.

The passage of the bill means, too, a recognition of the vital importance of aerial transport to a seaport in future. Boston lies 206 miles across Europe than does New York, and that much-needed advantage of the port of Boston cannot be utilized to full advantage unless there are provided in connection with that port means of transporting passengers and goods directly from the trans-Atlantic steamer to the airport, fastest, best terms of aerial transportation, the airport.





## 107







### WHERE WRIGHT AERONAUTICAL ENGINES ARE MADE

**ADDRESS.** Approximately 2 miles, located on Main Line of Erie Railroad.

**AREA.** 50,000 square feet.

**DESCRIPTION.** Four stories, size 75 ft. by 500 ft. Concrete and steel heavy wall type construction, 250 pounds per square foot loading.

**EQUIPMENT.** The plant is equipped at present to produce, and is producing, approximately 300 engines per year, with spare parts therefor, and has ample capacity in addition to provide adequately for all other plant requirements for all types of engines previously produced. The equipment of the plant provides for the complete manufacture of various type engines produced, including frames and aluminum castings, except for steel and drive shafts.

The capacity of the present plant could be expanded to produce engines at the rate of four per day in the present building. In an emergency the present savings would allow of enough additional buildings and equipment being provided within six to eight weeks to produce engines of any one type in quantity of at least 25 per day.

The plant has employed during the past year an average of 450 people, which includes a complete Engineering Department and Experimental Shop.

WRIGHT AERONAUTICAL CORPORATION  
PATERSON, NEW JERSEY, U. S. A.





## Aviation in Congress

Feb. 2. — March 18, 1932

- Feb. 8. *Senate*  
Mr. Jones of Washington introduced H. R. 3078, a bill to establish a Bureau of Aeronautics in the Department of Commerce for the purpose of making it self-sufficient business.
- Feb. 11. *Senate*  
Appropriation for the National Advisory Committee for Aeronautics struck out of Executive and Independent conference because bill (H. R. 3068) by the Senate increases of the pending bill H. R. 3078 to create a Bureau of Aeronautics in the Department of Commerce. Which brought up question of the need of the National Advisory Committee for Aeronautics.
- Feb. 13. *Senate*  
S. 3078, a bill to create a bureau of civil aviation in the Department of Commerce discussed in the Senate.
- Feb. 14. *Senate*  
S. 3078 passed the Senate 35 yeas and 16 nays.
- Feb. 15. *House*  
Message from the Senate that it had passed S. 3078 and wished conference of the House.
- Feb. 20. *House*  
Correspondence between Secretary Hoover and the Attorney General regarding title documents inserted in the record.
- Feb. 26. *House*  
Mr. Butler's bill (H. R. 3064) to authorize the conversion of battle cruisers into airplane carriers, to the Committee on Naval Affairs.
- March 1. *House*  
Favorable 439-0. By Mr. Frothingham, Resolution passed by the Quaker [Mass.] Chamber of Commerce, praying for the conversion of the cruiser Lexington to an aircraft carrier to the Committee on Naval Affairs.
- March 3. *House*  
Favorable 439-0. Petition of the Commercial Aircraft Association of Southern California, Los Angeles, Calif., endorsing and urging support of the Hays bill (H. R. 3064) a bill to create a bureau of civil aviation in the Department of Commerce; to the Committee on Interstate and Foreign Commerce.
- March 5. *House*  
Mr. Lodge presented petitions of 7029 citizens of the city of Quincy, Mass., praying that the battle cruiser Lexington, now under construction at the Fore River yard be converted into one of the new aircraft carriers authorized by the bill (H. R. 3064) which was referred to the Committee on Naval Affairs.
- March 6. *House*  
Second Delivery Appropriation Bill. An amendment to provide \$100,000 for loan re-imbursement and production lost.
- March 7. *House*  
Mr. Hyde's bill (H. R. 16713) to authorize the conversion of battle cruisers into airplane carriers; to the Committee on Naval Affairs.
- March 8. *House*  
Mr. Kelly of Pennsylvania's bill (H. R. 16713) to encourage commercial aviation and authorizing the Postmaster General to construct planes for mail service; to the Committee on the Post Office and Post Roads.
- March 9. *House*  
Mr. Hyde's bill (H. R. 16743) to authorize the conversion of battle cruisers into airplane carriers; to the Committee on Naval Affairs.
- March 9. *House*  
Conference report on H. R. 3068, (Independent Office Appropriations Bill) advises Senate to concur in its disagreement to Amendment No. 2. This amendment carried an appropriation of \$200,000 for the National Advisory Committee

for Aeronautics and \$10,000 for the construction of an additional laboratory building. This amendment has been agreed to by the House.

March 14. *House*

In submitting the Army Appropriation Bill H. R. 10471 the Committee on the Appropriations of the War Service to the House \$12,000,000. The Director of the Budget allowed \$13,500,000. Of the \$12,000,000, \$5,000,000 is allowed for the purchase of planes, \$4,000,000 for lighter-than-air and \$3,000,000 for defense experimentation and production.

Later in the discussion Mr. Fitzgerald in speaking on this bill upon the need of more money for experimentation.

March 15. *Senate*

In discussing the Peace Power Treaty, Mr. Reid introduced into the record the number of aircraft carriers of Great Britain, Japan and the United States with their speed, their armament and their carrying capacity. United States has 1—Great Britain 3—Japan 1.

March 17. *House*

A document by Rev. M. D. Shafter of Minneapolis on "The Army of the United States is a Continuous Force" was introduced into the record. In this document he speaks of the present savings in money by the use of the Texas Fuel Patrol.

March 18. *House*

Appropriation of \$1,000,000 allotted for the air mail service by the Senate.

—Associated Chamber of Commerce.

## Development of Metal Aircraft

The development of metal aircraft construction in the United States has been made possible by the Navy Department, in that the special alloy metal, duralumin, commonly known as Dural, has been introduced in United States manufacture in connection with the construction of metal aircraft in the Naval Aircraft Factory, Philadelphia. This work has now progressed to the point, says an official of the Navy Department, that development of proper quality and in all the shapes and sizes required to any aircraft builder from at least two commercial sources, and the Naval Aircraft Factory has developed special machinery and processes for the fabrication of metal aircraft.

Manufacturers doing business with the Bureau of Aeronautics have been frequently to visit the Naval Aircraft Factory, Philadelphia, to observe the metal fabrication work that is going on at this place. Besides the construction of the giant metal aircraft, whose parts are being made at Philadelphia for shipment to the Naval Air Station, Lakehurst, the Naval Aircraft Factory is also building metal wings, portables and other parts for airplanes.

Dr. Glenn L. Martin Co., of Cleveland, Ohio, has undertaken the development for the Bureau of Aeronautics of a number of airplanes to be constructed of duralumin to be used by the Fleet for spending money at long range. The construction into aircraft of duralumin is a departure of the firm which heretofore has constructed airplanes of ordinary wood and wire type, such as the well-known Martin Bombers which were used in the recent bombing tests against the Germans.

The Great Engineering Laboratories, Inc., of Detroit is also working with duralumin. This firm has a contract with the Navy Department for experimental torpedo-carrying airplanes to be built entirely of metal. A sample machine is now under final trials.

Other manufacturers now work for the Navy have employed duralumin for parts of airplanes with success, notably the Gulfstream Aircraft Corp. of Prattville, Ala., and the Douglas Aircraft and Motor Co. of Dayton, N. D. It is expected that future naval aircraft will be built of metal as an improving trend. The advantages of metal over wood are especially important for tropical service.

## ARMY AND NAVY AIR NEWS

## Air Service

Army Orders—Capt. Frederick A. Stenwig, A.S. (Inf.), resigned from further duty in the Air Service, is assigned to duty at Infantry, Camp McFalls, Ala.

First Lieut. Thomas A. Hays, A.S. (Inf.), referred from hospital in the States to the States, is assigned to the 10th Tank Battalion, Fort Benning, Ga.

First Lieut. Robert C. Hensley, A.S. (Infantry), transferred to the Field Artillery.

The following officers, referred from further duty at the States, are assigned to the Office of the C.A.S. for temporary duty and to return two months, upon completion of work they will proceed to Air Intermediate Depot, Philadelphia, Pa. for duty with the Industrial War Service.

First Lieut. Charles B. DeWitt, First Lieut. Richard C. F. Dwyer, First Lieut. Stephen M. Landon, First Lieut. David S. Gault, First Lieut. Fred S. Brown, Kelly Field, Texas; First Lieut. Ervin S. Frost, Jr., First Lieut. Edward J. Taylor, Charleston Field, Pa.; First Lieut. John C. Hensley, Charleston Field, Pa.; First Lieut. Robert S. Givens, First Lieut. Edward H. Moore, First Lieut. Ralph C. Dwyer, Langley Field, Va.; First Lieut. Arthur J. Robinson, Bolling Field, D. C.

Cubana Trailer Leaves the Air Service—Col. Albert E. Tracy, Maj. Corps transferred recently by Army, Col. William R. Duns, Maj. Corps, as Chief of Medical Section in the Office of the Chief of Air Service, has assumed command of the Lakeside General Hospital, Presidio of San Francisco, Calif. During his three years of service in the Office of the Chief of Air Service, Colonel Tracy's efforts in the medical field of aviation were productive of many accomplishments. Through his efforts the Medical Research Laboratory, Mitchell Field, L. I., New York where the School for Flight Surgeons is conducted, became a recognized special aviation school last year.

Commission in the U. S. Army Reserve Corps—It is believed that many young men, recently graduated from college or about to be, will be attracted to know how they may become aviators and hold positions at the same time obtain a commission in the U. S. Army Reserve Corps. There does exist an opportunity and it is not limited to college students. There is a many instance, where a man is possessed of a good high school education, the curriculum of which includes sufficient mathematics and sciences, he may, upon satisfying the requirements of the Air Service, be accepted by the Air Service (Bullion School) as a cadet and available for a Reserve Commission.

The Army Air Service has established schools for the training of Aviator Pilots and Bullion Observers. The object of these schools is Bullion School, to provide an adequate Reserve Corps, second—To educate the young men of modern times in Aeronautics, past and present, and the possibilities of aeronautics in the future; and, last, but by no means least, to promote the culture of commercial aeronautics. This last object will bring a far reaching benefit if it is carried out as contemplated. Commercial aeronautics has become a factor in economic factor in many countries, and this country has for greater possibilities in the matter of lighter-than-air craft in particular, because of the large helium resources of the United States and the expense of the national territory. With a view to the great future of aircraft development in this country the government offers a course of instruction

leading to a Reserve Commission at the Bullion School, Ross Field, Calif.

The course at this school covers a period of about six months, and includes primary training in airplanes. An advanced course in airplane work is offered at Langley Field, Va., for those who complete the Bullion Observers' and Primary Aviator courses at Ross Field. Thus advanced aviators, whose course covers a period of about six months, and when the cadet graduates he is competent to handle any airplane in this country at the present time. This advanced course at Langley Field is not necessary to qualify for a Reserve Commission, and it gives an opportunity of the Bullion Observers' Course. While retaining a Reserve Commission in the Air Service, the cadet Pilot may, at the opportunity presents itself, continue his flying training by taking postulated flights in the craft he is eligible to pilot.

Cadets are paid at the rate of \$75.00 a month, exclusive of board, lodging and clothing. Applicants are accepted between the ages of 20 and 35, preferably not over 30, and unmarriage.

1932 Squadron (Observation)—Prior to the arrival of an Air Service officer the day with the 10th Division, U. S. Army, the headquarters of which is Oklahoma City, Reg. 3, C. King, Cavalry, A. C. of (D-1), hosts the organization of the 10th Squadron (Observation) 30th Division. At the present time Capt. Louis D. Ahlberg, A. S. O. H. C., Oklahoma City, the senior officer of the squadron, is the first promotion, and with by virtue of his rank and experience, command the squadron. The headquarters of the Air Service of the 30th Division is at Muskogee, where the Air Service officer with the Division (now at Oklahoma City) will be located. The headquarters of the 10th Squadron is at Oklahoma City.

It may be of interest to set forth the situation of Air Service units in the State of Oklahoma.

The first group for organization in the State of Oklahoma is: Division Troops—55 Divisions. A.S. Hays, Muskogee, 10th Squadron (Obs.), Oklahoma City, 30th Photo Section, Tulsa. Branch Intelligence Office, A.S., 30th Div., not at Muskogee.

Second Group: Army Troops, III Field Army—21st Attack Group, Hays, 4724 Attack Squadron, 4724 Attack Squadron, 4744 Attack Squadron, 30th Air Park, 431st Photo Section, Tulsa, Okla.

Third Group: XVIIIth Corps Troops, VI Field Army—30th Squadron (Obs.), Tulsa; 30th Photo Section, 30th Photo Section, 19th Construction Section, Oklahoma City.

As seen as the Division Air Service is completely organized and capable of functioning in case of mobilization for an emergency, the second priority organization, and then the third will be started.

Outline of the regular Air Service personnel at Post Field, there are no other Indian Air Service activities in the State beyond what has been here mentioned.

The Aviation Committee of the Chamber of Commerce of Oklahoma City is a wide-awake organization. They are at the moment on the lookout for better training facilities than now possessed at Muskogee Field. They realize the great future of aviation and are anxious to have Oklahoma City as the air base.

The same committee is forming the nucleus of a National Guard Squadron for the State, with the idea that they may get flying training which they must have before being eligible for appointment as Reserve Officers.



## Foreign News

**Argentine Republic**—Aviation is making rapid strides in Argentina where the government has foreseen the future of this new method of locomotion and all the advantages which it may expect from its development. An important net work of commercial air lines is already under construction.

The Argentine National Aeronautical Federation has succeeded in getting together eleven clubs and more than 1100 affiliated members, and in preparing 125 aerodromes. Each club, in order to have a right to existence, must have 50 members. So far the Aeronautical Federation owns 127 machines, distributed among the clubs. There are 29 American Curtiss machines, 35 Italian Ansaldo machines, two Caproni "twins," a few Farnan-Savoia, Breguet, Caudron, Goliath and Spad types.

The first attempts to establish aerial lines were made by the French and English missions. The former made the connection by airplane between Montevideo and Buenos Aires (300 km.), the latter put up the line station of Mar del Plata a few hours distant from Buenos Aires. But those were only attempts intended to test the regularity and rapidity of air service. Seven lines have been considered by the government, one of which is already under construction—(Bain-Bancario Gazco) with landing places in all the large intermediate centers. That makes 2800 km. for the airplane to travel.

The government has given the concessioner exclusive control of the line for ten years; it has put at his disposal, gratuitously, the necessary ground, but furnishes no subvention. In brief, the foundation is in charge of the government, which does not concern itself with the superstructure. On the other hand, it reserves the right, in case of strike on the part of the maritime services which carry on the coasting trade in the south, to use the airplanes when it desires.

**Germany**—The director of the Aero Union, a German aircraft corporation, with headquarters in Berlin, which controls and operates the Deutsche Luftreederei, air traffic company, announced recently that his company has made arrangements to establish an aircraft factory near Pisa, Italy, and that the production of all-metal duralumin airplanes is expected in May or June, 1922. The raw material for these airplanes will be shipped from Germany and worked up and assembled in Italy by German and Italian workmen. The Aero Union was organized a few months ago, and is controlled by a combination of the Allgemeine Elektrizitäts Gesellschaft (The General Electric Company of Germany), the Hamburg-American Shipping interest, and the Zeppelin Aircraft interests.

Announcement has also been made that the Aero Union, in cooperation with the Russian Government, has organized a company under the name of German Russian Air Transportation Co. The company has just inaugurated a regular air service between Germany and Russia with passenger airplanes of the Russian government, temporarily on the stretch between Königsberg-Moscow. The service will primarily be for the purpose of transmitting official courier mail matter from Berlin to Moscow and Moscow to Berlin, as well as passenger and light freight service.

**France**—It has now been definitely decided by the Chambre Syndicale des Industries Aéronautiques that they will hold an Aero Exhibition in Paris this year. It will be, as before, at the Grand Palais, and although the actual date is not settled, it will probably be in December for a fortnight, although there are many who would prefer September to be the selected month.

**Austria**—It is reliably reported that negotiations have begun between representatives of the Czechoslovak and Austrian governments regarding a regular air service between Prague and Vienna.

**Egypt**—The aerial mail route established between Cairo and Bagdad has been extended to include Palestine. A regular fortnightly service will be maintained in each direction.

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